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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/960,076	09/21/2001	Christopher Roberts	IMP 1653-002	4747

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EXAMINER

GILLIAM, BARBARA LEE

ART UNIT	PAPER NUMBER
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1752

8

DATE MAILED: 01/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application N .

09/960,076

Applicant(s)

ROBERTS ET AL.

Examiner

Barbara Gilliam

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on IDS filed 8/28/02.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>Z</u> . | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

1. Claims 1-17 are pending.

#### ***Specification***

2. The use of the trademark QUILLON has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

#### ***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a. With respect to claims 1-6, the composition of claim 1 comprises a transfer base in an effective amount; a puff base material in an effective amount; and at least one pigment concentrate in an effective amount. According to the MPEP, 2173.05(c) III, the phrase "an effective amount" has been held to be indefinite when the claim fails to state the function which is to be achieved and more than one effect can be implied from the specification or the relevant art. In re Fredericksen 213 F.2d 547, 102 USPQ 35 (CCPA 1954).

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b. With respect to claims 6-11, Claim 6 contains the trademark/trade name QUILLON. Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe a sheet of substrate and, accordingly, the identification/description is indefinite.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 12-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Newman et al.

a. In US Patent No. 4,092,456, Newman et al teach transfer elements for exuding liquid ink to a copy sheet under the effects of image pressure, and the method of making such transfer elements. A resinous solvent composition comprising a blowing

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agent and a soluble solid is applied to a coating surface, the blowing agent is activated and the soluble solid is dissolved out to form a porous resinous layer which is impregnated with a pressure-exudable liquid duplicating ink (abstract). In Example 1, the nylon polyamide is the pore forming material and therefore meets the present limitations for the puff base material. The liquid duplicating ink of Example 1 comprising mineral oil and carbon black meet the present limitation for a transfer base material and a pigment concentrate.

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-5, 10, 12-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishii et al.

a. In US Patent No. 4,482,598, Ishii et al teach a transfer sheet for producing decorative articles and a method of making a transfer sheet having foamed convex parts, comprising a substrate having a surface for reliably supporting a pattern thereon and a pattern of material with the ability to foam in the presence of heat, releasably supported upon the surface (claims 1 & 6). The heat-foamable layer comprises a polyvinyl chloride plastisol layer containing a foaming agent (claim 7) which meets the present limitations for the puff base material and the blowing agent respectively. The blowing agents taught

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include alkaline compounds which also meet the present limitations for a base.

Examples of materials usable for the substrate are papers such as tissue paper, vegetable parchment, parchment and kraft paper (column 3, lines 7-16). A heat foamable ink is prepared by mixing a blowing agent into an ink in which a suitable vehicle is employed and is applied by a known printing method and thus formed into the pattern (column 4, lines 3-10). Examples of vehicles include cellulose derivatives (column 3, lines 23-36). Further to this vehicle a plasticizer, a stabilizer, a dispersant, a filler, a coloring agent of a dye or pigment, a solvent, and a diluent are suitably added (column 4, lines 10-14). The vehicle comprising a plasticizer meets the present limitations for a transfer base material. The coloring agent of a dye meets the present limitations for a pigment concentrate.

b. Ishii et al do not teach specific quantities of the pastisol ink, the blowing agent, the coloring agent of a pigment or the vehicle however it is clear from the teachings of Ishii et al that the ink is present in the greatest amount because every other component is mixed into the ink including coloring agent of a pigment and the vehicle. (column 4, lines 3-29). Therefore the Examiner asserts the present ranges are obvious in view of the prior art teachings.

c. It would have been obvious to one of ordinary skill in the art to make a transfer sheet having foamed convex parts, comprising a substrate having a surface for reliably supporting a pattern thereon and a pattern of material with the ability to foam in the presence of heat, releasably supported upon the surface wherein the heat-foamable layer comprises a polyvinyl chloride plastisol, a blowing agent, a cellulose

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vehicle, a plasticizer, a coloring agent of a pigment with reasonable expectation of obtaining a transfer sheet that is activated by heat based on the teachings of Ishii et al.

9. Claims 6-9 and 11 rejected under 35 U.S.C. 103(a) as being unpatentable over Ishii et al as applied to claims 1-5, 10, 12-17 above, and further in view of Prawdzik et al.

a. As indicated in the corresponding 35 USC 103 rejection, Ishii et al teach a transfer sheet having foamed convex parts, comprising a substrate having a surface for reliably supporting a pattern thereon and a pattern of material with the ability to foam in the presence of heat, releasably supported upon the surface (claims 1 & 6). Ishii et al clearly teach a release layer comprising a vehicle and a release paint such prepared by further adding silicone, wax, or the like to the vehicle (column 3, lines 17 –22). In US Patent No. 4,689,102, Prawdzik et al teach an improved release medium for used in the production of decorative laminates by both low or high pressure consolidation (abstract). The release coating may comprise a variety of conventional materials which enable the release medium to readily separate from the adjacent press assembly subsequent to the formation of the laminate and completion of the lamination process. Typically, a silicone-containing layer will be employed as the release coating although various stearates (such as marketed by DuPont under the trademark QUILLON) may be used.

b. Therefore it would have been obvious to one of ordinary skill in the art coat a substrate such as parchment paper with a commercially available release coating such as QUILLON in order to make a transfer sheet further comprising a heat-foamable layer based on the teachings of Prawdzik et al.

10. Claims 1, 5, 12-13, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wagner et al.

a. In US Patent No. 6,105,502, Wagner et al teach a printing process using reactive ink, comprising the steps of preparing an ink comprising a colorant, at least one compound having at least one functional group which reacts with active hydrogen, and at least one compound having at least one functional group containing active hydrogen, supplying an offset printing device with the ink, and printing the ink by means of the offset printing device on a first substrate to form an image on the first substrate and subsequently transferring the image from the first substrate to a final substrate by applying heat to the first substrate and reacting the two compounds with functional groups with each other (claim 1). The first substrate can be paper (column 4, lines 9-19). The colorants used in the ink may be dyes or pigments (column 7, lines 19-26). The pigment colorant meet the present limitations for the pigment concentrate. Polymeric binder materials may be incorporated into the ink and may include resins and mixtures thereof (column 7, lines 1-18). Other ingredients in the ink formulations may include waxes, greases, plasticizers, stabilizers, drying agents, thickeners, dispersants and fillers (column 7, lines 36-38). The polymeric binder material and plasticizer meet the present limitations for the transfer base material. Thermally expandable ink may be produced which comprises an expanding agent. Simultaneous expanding and cross-linking gives a three-dimensional image which is permanently bound to the substrate. The height of the image is dependent on the concentration of the expanding agent, the temperature and the pressure applied during heat transfer printing. Preferably expanding agents



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include those which decompose upon heating to release gaseous products which cause the ink to expand. Such expanding agents, known as chemical blowing agents (column 7, lines 55 –67). The expanding agent, also known as blowing agent, meets the present limitations for the blowing agent and the resin expanded meets the present limitations for the resin of the puff base material.

b. Therefore it would have been obvious to one of ordinary skill in the art perform a printing process using reactive ink, comprising the steps of preparing an ink comprising a colorant, a polymeric binder, an expanding agent, at least one compound having at least one functional group which reacts with active hydrogen, and at least one compound having at least one functional group containing active hydrogen, supplying an offset printing device with the ink, and printing the ink by means of the offset printing device on a first substrate to form an image on the first substrate and subsequently transferring the image from the first substrate to a final substrate by applying heat to the first substrate and reacting the two compounds with functional groups with each other based on the teachings of Wagner et al.

### ***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. In US Patent Application No. 2002/0000288, Boyd et al teach a method and apparatus for applying a stable printed image onto a fabric substrate.

b. In US Patent No. 6,488,370, Hale et al teach printed media produced by permanent heat activated printing process.

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c. In US Patent No. 6,092,464, Meola et al teach a three-dimensional raised image screen printing.

d. In US Patent No. 5,196,237, May teaches a method for coloring fabric with crayon.

e. In US Patent No. 4,844,849, Miller et al teach a method of making embossed decorative sheets.

f. In US patent No. 4,277,427, Kaminski et al teach randomly embossed surface covering.

g. In US Patent No. 4,255,217, Franze teach a method of forming an embossed decorative surface covering.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Barbara Gilliam whose telephone number is 703-305-1330. The examiner can normally be reached on Monday through Thursday.

a. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Baxter can be reached on 703-308-2303. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

b. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

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*B. Gilliam*

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January 17, 2003

*Janet Baxter*

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